

Comments on the Draft EIS and Responses

LOCAL AGENCIES

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WHATCOM COUNTY COUNCIL

FROM THE DESK OF COUNCILMEMBER DAN MCSHANE

March 15, 2005

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Reference
OEP/DG2E/Gas Branch 2
Northwest Pipeline Project
Docket Nos. CP05-32-000, -001

Dear Ms Salas:

The following comments are submitted in regards to the Draft Environmental Impact Statement for the Capacity Replacement Project, Northwest Pipeline Corporation.

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- LA1-1 Page ES-5, 2nd full paragraph, last sentence: The sentence states that major volcanic activity and major earthquakes are unlikely to occur during the operation life of the proposed project. Without a definition of major earthquakes, this seems to be an overstatement. The Nisqually Earthquake of two years ago was considered major by some, and for those living in Deming the 1989 and 1990 earthquakes associated with the Mcaulley Creek Fault were major earthquake events. The DEIS does a good job in the main portion of the text in regards to earthquake risks. This sentence in the Executive summary detracts from that analysis.
- LA1-2 Page 4-5, Table 4.1.2-1: Whatcom County has designated Mineral Resource Land on both sides of the pipeline at Milepost 1482.2. One pit is operational 200 feet to the west, but it should be anticipated that the mine will expand to the right-of way and mining will also take place to the east of the right-of-way.
- LA1-3 Page 4-5, 1st paragraph, last sentence: The statement that there is an abundance of sand and gravel deposits in the area is not accurate. The Reconnaissance Investigation of Sand and Gravel, and Quarried Bedrock Resources in the Bellingham 1:100,000 Quadrangle (Washington Division of Geology and Earth Resources Information Circular 91) states in the conclusion "However, the area's supply of aggregate resources is generally sparse for geologic reasons and high quality permitted resources are rapidly decreasing".

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- LA1-1 Because the potential for geologic hazards to impact the project is summarized in preceding paragraphs in the Executive Summary and is discussed in detail in section 4.1.3, the referenced sentence has been removed from the Executive Summary.
- LA1-2 Table 4.1.2-1 has been revised to note that Whatcom County has designated Mineral Resource Land on both sides of Northwest's existing right-of-way at MP 1482.2. However, it should be noted that the proposed Sumas Loop would be located within Northwest's existing permanent right-of-way, which already precludes surface mining at this location.
- LA1-3 The sentence regarding the abundance of sand and gravel deposits in the area has been removed from section 4.1.2 and the section has been revised to clarify that construction and operation of the proposed project would not significantly affect current or future mining operations in the region. As discussed in section 4.1.2, 93 percent of the loops would be constructed within Northwest's existing permanent right-of-way, which already precludes surface mining operations. Northwest has not been contacted by the operator of the gravel pit at MP 1482.2 regarding any proposed expansion of this facility and has no plans to relocate its existing right-of-way in this area.

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- LA1-3 (cont'd) | The low future supply is further compounded by the fact that the bulk of the remaining deposits in Whatcom County underlie prime agricultural soils and the County has a policy to not allow mining in prime agricultural soils. While I do not believe the loss of aggregate from the deposit crossed at milepost 1482.2 is hugely significant to Whatcom County's supply, it is not accurate to state that there is an abundance of supply throughout the route of the loops. A possible mitigation for milepost 1482.2 is that once mining is completed west of the pipeline, the pipeline would be moved to the west so that the full deposit crossed by the pipeline could be accessed.
- LA1-4 | Page 4-8, Everson Slide: Statements in the discussion of the pipeline crossing the Everson Slide area imply that the pipeline has been rerouted to above the head of the landslide. The pipeline was rerouted after it was ruptured by earth movement to a location well upslope from the area where the ground had ruptured in the slide. However, based on my review of the slope and drilling logs from the slide investigation, it is my opinion that the rerouted pipeline is still located on the slide. This opinion is shared by Doug Goldthorpe, Whatcom County Geologist, Whatcom County Planning and Development Services. Whatcom County required that the described monitoring equipment be installed at the site over the objections of Williams Pipeline. The last sentence should read: The Sumas Loop will be installed uphill from the existing pipelines, further away from the area impacted by the 1997 slide. Mitigation at this location should include strain gauges.
- LA1-5 | Page 4-11, bulleted mitigation measures: There are not many identified landslide hazard zones crossed by the loops. Specific mitigation and an evaluation of the mitigation for each slide should be provided and alternative mitigation should be considered. For example, on the Everson Slide strain gages and other monitoring equipment are in use. An alternative would be to reroute the pipeline at this time completely off of this identified slide area. There are pros and cons to either alternative that should be evaluated.
- LA1-6 | The aerial reconnaissance by a geologist is very unlikely to identify any pending slide activity because the forest canopy obscures even fairly large earth movement. A periodic on the ground inspection of the slide areas would be much more appropriate.
- LA1-7 | Page 4-12, 3rd paragraph: The discussion regarding landslide mitigation measures is ambiguous. One sentence says that a BMP would be to avoid areas of known mass wasting where possible. However, the Sumas Loop will cross several identified landslide areas, one of, which caused the pipeline to rupture in 1997. As noted above, it is my opinion and others that the pipeline has not been routed around the Everson slide. It is unclear what the specific monitoring plan will be for the slides identified. There are not very many identified. The DEIS should describe the proposed monitoring plan for each slide area identified and evaluate the risk and alternatives for monitoring these areas.

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- LA1-4 | Section 4.1.3 has been revised to include additional information regarding geologic conditions near the Everson Landslide and to document Northwest's compliance with a Monitoring and Mitigation Plan for the Everson Landslide that was approved by Whatcom County. The Monitoring and Mitigation Plan would continue to be implemented for the pipeline route near the Everson Landslide including submission of annual reports to Whatcom County.
- LA1-5 | Section 4.1.3 has been revised to reflect that specific mitigation options for each landslide hazard area along the proposed loops are tabulated in the report titled *Capacity Replacement Project Geohazards, Whatcom, Skagit, Snohomish, Pierce, and Thurston Counties, Washington* (Golder, 2004b).⁵ See also the response to comment LA1-4.
- LA1-6 | Northwest indicated that it has had success, even in forested western Washington, in identifying landslides from aerial reconnaissance, particularly from helicopters. An example includes the Vail Mountain Landslide in the southern Redmond District that was identified by aerial reconnaissance in 1997 following the prolonged and intense rainfall of the 1996/1997 winter season. Nevertheless, Northwest follows the guidelines outlined in Title 49 CFR Part 192 and performs both aerial surveys and ground inspections of its pipeline right-of-way.
- LA1-7 | See the responses to comments LA1-4 and LA1-5.

⁵ This report is too voluminous to include in this EIS. It is available for public inspection at the FERC's Public Reference Room in Washington, DC (call (202) 502-8317 for instructions) and at the WDOE's regional offices. If you reside in Whatcom, Skagit, Snohomish, or King Counties, you can access this document at the WDOE's Northwest Regional Office in Bellevue by calling the Public Disclosure Coordinator at (425) 649-7190 or (425) 649-7239. If you reside in Pierce, Thurston, Lewis, Cowlitz, or Clark Counties, you can access this document at the WDOE's Southwest Regional Office in Lacey by calling the Public Disclosure Coordinator at (360) 407-6365.

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LA1-8 Page 4-106, bold text: I am pleased that FERC staff has added the requirement that Northwest develop locally specific Noxious Weed Control Plans. I hope that FERC will assist the local Noxious Weed Control boards to enforce the plans. The native local ecology of the area is predominantly forest. Areas where the forest canopy is opened and left open will become incubator areas for invasive noxious weed infestations unless ongoing aggressive maintenance is applied. Pipeline and electric transmission corridors in Whatcom County are often areas of significant noxious weed infestations in Whatcom County.

Thank you for consideration of these comments and I hope they provide some small assistance in your evaluation of this project.

Sincerely,



Dan McShane, LEG, M.Sc
Licensed Engineering Geologist
Whatcom County Councilmember



C: Dana Brown-Davis, Clerk of the Council
Correspondence File

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LA1-8 Thank you for your comment. Section 4.5.4 has been revised to indicate that Northwest has revised its ECR Plan to incorporate the FERC staff's recommendations included in the draft EIS and those of the county weed control departments. Full-time third-party compliance monitors representing the FERC staff would be present on the construction spreads to monitor compliance with the project mitigation measures and requirements including the implementation of the measures in Northwest's revised ECR Plan to prevent the spread of noxious weeds during construction (see section 2.5).

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April 22, 2005

Docket Nos. CP05-32-000 and CP05-32-001
Gas Branch 2, DG2E

Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Dear Sir or Madam:

The following comments constitute Snohomish County's (Washington) response to the Draft Environmental Impact Statement (DEIS) issued by the Federal Energy Regulatory Commission (FERC) for the proposed Capacity Replacement Project for Northwest Pipeline Corporation (Docket Nos. CP05-32-000 and CP05-32-001; FERC/EIS - -178D) issued March 2005.

These comments focus on the portion of the project that is within Snohomish County permitting jurisdiction, including the Mount Vernon Loop and the northern portion of the Snohomish Loop.

Snohomish County has reviewed the DEIS in its entirety and has concluded that it is inadequate under Ch. 43.21C RCW and Ch. 197-11 WAC (State Environmental Policy Act) and under Ch. 90.58 RCW and Ch. 173-27 WAC (Shoreline Management Act) for the reasons set forth in this letter. In particular, the DEIS is inadequate in that it fails to analyze in sufficient detail the probable direct, indirect, and cumulative adverse environmental impacts that will result from replacement and new construction of the gas pipeline. If Snohomish County is to be the permitting agency for some of this project, the present state of the DEIS is inadequate for use at the construction phase of review.

Accordingly, Snohomish County strongly urges FERC to prepare a Supplemental DEIS to address the inadequacies described below, so that the document will meet the minimum requirements of the law and form a strong basis from which permitting decisions can be made.

What follows is a list of specific comments on the DEIS, that correspond to the cited chapters in the document.

CHAPTER 1 - INTRODUCTION

- LA2-1 Table 1.5-1, page 1-17, 18: The "Statement of Compliance" for the Snohomish County permits and reviews is limited to application for the permits by Northwest Pipeline Corporation. Merely applying for the permits is not adequate. Please modify this section to indicate that the Shoreline Permit, the Flood Hazard Permit, the Grading Permit, and the Rights-of-Way Permit will be obtained from Snohomish County, and the Franchise Agreement will be executed.

CHAPTER 2 - DESCRIPTION OF THE PROPOSED ACTION

- LA2-2 2.3.1, Page 2-20, Lowering-in and Backfilling: Trench dewatering is proposed to pump water from the trench and into either a filter bag or a straw bale dewatering structure. The detail provided in Appendix G (drawing number 1408.34-X-0013) for the straw bale structure is for a 12' x 12' device (outside dimensions). The BMP appears to be more cosmetic than it is

- LA2-1 The statement of compliance information presented in table 1.5-1 has been revised to clarify that Northwest would apply for and comply with all permit stipulations.
- LA2-2 Section 2.3.1 has been revised to state that the trench dewatering structure would be sized to handle the volume of water in the trench. In accordance with the FERC staff's Procedures, dewatering would occur in a manner that does not cause erosion and does not result in heavily silt-laden water flowing into any waterbody. Furthermore, the WDOE does not allow any discharge that would increase a surface waterbody's flow by more than 10 percent.
- Section 2.5 has been revised to indicate that, in addition to Northwest's environmental inspection program, full-time third-party compliance monitors representing the FERC would be present on the construction spreads to monitor and document compliance with project mitigation measures and requirements. During construction, the third-party compliance monitors would conduct daily ongoing inspections of construction activities and mitigation measures, including the monitoring of trench dewatering activities, to ensure that the dewatering structures are adequate to dissipate energy and filter the test water.

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- LA2-2 (cont'd) functional. There is no mention of modification in the size of the BMP in relation to the volume of water that is being pumped from the trench. In the event that more than 64 cubic feet of water is pumped from the trench and the rate of pumping is greater than the rate of water passage through the straw and filter fabric, water will overtop the device and become a point source discharge. Snohomish County is concerned about the adequacy of this dewatering proposal because trench water is anticipated in areas with a high ground water table, in areas with perched wetlands, and in the hyporheic zone around streams and rivers. Please discuss the potential deleterious impacts to critical areas by both the dewatering activities and the potential erosion/flooding that may result from the discharge from the BMP structure.
- LA2-3 2.3.1, Page 2-21, Hydrostatic Testing: Hydrostatic testing will involve large volumes of water. The proposal to discharge the water into straw bale dewatering devices is inadequate for the volume of water that will be discharged (Appendix G, drawing number 1408.34-X-0012). Many of the discharge points, as indicated in Appendix B, are in proximity to streams. Some of the streams contain species that are listed as Threatened under the Endangered Species Act. Please provide a discussion, including hydraulic calculations, for the proposed discharges and the potential for downstream scour and sediment transport.
- LA2-4 2.3.2, Page 2-28 and Page 2-30, Details for Typical Wet Open-Cut Method and Typical Flume Method: The details show spoil placement within 10 feet of the Ordinary High Water Mark (OHWM) of the water body, and show Extra Workspace within 50 feet of the OHWM. Previous projects that use these devices have experienced water quality problems because the distances do not provide sufficient space for water quality by filtration through natural vegetation. Snohomish County Best Available Science (BAS) analyses indicate that a 50 foot buffer is inadequate to provide acceptable water quality during construction. Please provide documentation that placement of silt fence and straw bale barriers will provide adequate treatment so that potential stormwater runoff will meet the water quality standards.
- CHAPTER 4 – ENVIRONMENTAL ANALYSIS**
- LA2-5 Table 4.3.1-3, Page 4-37, Summary of Hydrostatic Test Water Discharge Locations The discharge locations range from 30 to 380 feet upland from the construction area. No analysis is provided for the adequacy of downstream drainage pathways. Snohomish County is concerned about potential scour, erosion, and sedimentation associated with the discharge, and the potential impacts to critical areas. These potential impacts need to be addressed.
- LA2-6 Table 4.3.2-4, Page 4-43, Designated Shorelines Crossed by the Loops Six (6) shoreline crossings are proposed involving five rivers and creeks, one of which will be crossed twice. A shoreline permit that includes all of these crossings will be required. The current shoreline application is only for crossings that involve proposed HDD methods for two forks of the Stillaguamish. The proposal to cross the six (6) waterbodies subject to shoreline jurisdiction by any method other than HDD will require a more detailed analysis of construction impacts than is included in this, and subsequent, sections.
- LA2-7 4.3.2.2, Page 4-44, General Impact and Mitigation: The document indicates that state water quality standards will be exceeded, but the impacts would be temporary and short term. Snohomish County cannot authorize construction that will knowingly be out of compliance with requirements of the NPDES permits without a detailed workplan that includes the use of all reasonable and available BMPs that will minimize the impacts. Grading construction activities, in later sections, proposes to place excavated materials within the streambeds, immediately downstream from the trench. These construction methods would not be approved for any other

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LA2-3 Sections 2.3.1, 4.3.1.4, and 4.3.2.7 have been revised to state that the dewatering structures would be sized to handle the required volume of water. The discharge rate would be controlled to prevent the water from flowing over the top of the dewatering structures and becoming a point source discharge. Northwest is required to use energy dissipation devices and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow. In addition, Northwest may not discharge at such a rate as to cause flow in a surface waterbody to increase more than 10 percent. The dewatering structures would be located in upland areas at a significant distance from wetlands and waterbodies to promote infiltration and prevent sedimentation of wetlands, waterbodies, or other sensitive areas. No test water would be discharged directly to waterbodies or wetlands.

Sections 2.3.1, 4.3.1.4, and 4.3.2.7 have also been revised to clarify that all discharges would be conducted in accordance with the requirements for hydrostatic test water discharges included in Northwest's NPDES Individual Permit for Stormwater Discharges that would be issued by the WDOE. These revised sections state that WDOE staff would conduct field reviews of Northwest's proposed hydrostatic test water discharge locations, as required, as part of the WDOE's NPDES permit review process. Based on this field review, modifications to the discharge locations would be made as necessary to ensure that the test water would infiltrate the ground before reaching sensitive areas.

Section 2.5 has been revised to indicate that, in addition to Northwest's environmental inspection program, full-time third-party compliance monitors representing the FERC would be present on the construction spreads to monitor and document compliance with project mitigation measures and requirements. During construction, the third-party compliance monitors would conduct daily ongoing inspections of construction activities and mitigation measures, including the monitoring of hydrostatic test water discharge activities, to ensure that the dewatering structures are adequate to dissipate energy and filter the test water.

LA2-4 Northwest's permit applications to the county incorporate measures and procedures that were used and permitted by the county during other recent Northwest projects. In addition, Northwest has applied for and must obtain before construction a section 401 Water Quality Certification from the WDOE as well as an NPDES Individual Permit for Stormwater Discharges from the WDOE. Northwest would comply with the conditions/stipulations in each of these permits. Compliance with these permits should satisfy the provision of the Snohomish County Code (SCC) (7.53), which states that a prohibited discharge:

- (1) causes or contributes to a violation of State Water Quality Standards; or
- (2) causes or contributes to a violation of any NPDES permit or State Waste Discharge permit issued to the county.

In compliance with SCC 7.53.120, Northwest would utilize best management practices throughout construction of the project as provided in the ECR Plan

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- LA2-4 (cont'd) specifically prepared for the Capacity Replacement Project and previously submitted to the county. Northwest would also prepare a Stormwater Pollution Prevention Plan for construction in Snohomish County. In addition, Northwest would comply with and implement the FERC staff's Plan and Procedures. See also the responses to comments LA2-23 and LA2-24.
- LA2-5 See the response to comment LA2-3.
- LA2-6 All six designated shoreline crossings were included in Northwest's application as was clarified during the June 21, 2005 meeting between representatives of Snohomish County, Northwest, the FERC, the WDOE, and the WDFW. At that meeting, the FERC was directed by Snohomish County to disregard this comment.
- LA2-7 Sections 4.3.2.3 and 4.6.2.3 have been revised to include a more detailed discussion of Northwest's proposed waterbody crossing methods, the potential impacts of these waterbody crossing methods, and measures to minimize and compensate for unavoidable impacts on water resources. Section 4.3.2.3 has been revised to provide the most current information regarding Northwest's proposed Mitigation Plan for Waterbody Crossings. Appendix S contains the April 2005 draft of this plan.
- The revised section 4.3.2.3 includes the FERC staff's recommendation that Northwest continue consultations with the applicable agencies and Native American tribes and file the final site-specific waterbody crossing plans and final Mitigation Plan for Waterbody Crossings with the Secretary for the review and written approval of the Director of the OEP before construction at each applicable waterbody (see also mitigation measure number 17 in section 5.4). These final plans may incorporate new information that may become available as Northwest continues consultations with the COE, the WDOE, the WDFW, various county agencies, and Native American tribes. The FWS and NOAA Fisheries may impose additional mitigation as well as part of their Biological Opinions (see section 4.7) that also should be included in Northwest's Mitigation Plan for Waterbody Crossings. The FERC staff believes these continued consultations will result in the development of acceptable site-specific crossing plans and mitigation requirements for the waterbodies that would be crossed by the Capacity Replacement Project. Section 4.3.2.3 also explains how the public and other agencies can view the final plans once they are filed.

- LA2-7 (cont'd) construction project by either a private entity or a public agency. Please clarify the special circumstance that precludes this project from compliance with regulations that otherwise apply to every other project that proposes water crossings within unincorporated Snohomish County.
- LA2-8 4.3.2.2, Page 4-46, Waterbody Construction and Mitigation Procedures: The opening paragraph of this section proposed to use either open cut or flume construction to cross waterbodies. It is the position of Snohomish County that the difference in these two methods is only a detail of flowing water --- the stream bottom will be open cut with a trench that extends a minimum of eight (8) feet below the level of the stream bed (5 feet of cover and the 36" pipe). Many streams have hyporheic flow within the gravels below the stream bed. These subsurface flows are significant to rearing of salmonids. The DEIS does not address the impact of trenching and dewatering activities on these waters and these biological functions.
- LA2-9 4.3.2-6, Page 4-50, Major and Sensitive Waterbodies Crossed: Table 4.3.2-6 does not include all waterbodies that contain Threatened and Endangered Species that have been listed under ESA, and does not include all waterbodies that are included as Shorelines of the State, which are listed in Table 4.3.2-4 (Page 4-43). Streams that are known and presumed habitats for ESA listed species within unincorporated Snohomish County are listed on Page 11 of this response. Please expand the table to include both all waterbodies that are shorelines of the state and that are presumed or documented habitat for Threatened and Endangered Species. Snohomish County strongly objects to either open-cut or flume crossings of these waterbodies.
- LA2-10 Table 4.3.2-7, Page 4-57, Summary of Potential Crossing Methods: The probability of HDD success for crossing the North Fork of the Stillaguamish River is reported to be 50%. The alternative that is feasible and without additional conditions is a wet open-cut crossing. It is strongly recommended that the HDD design be modified so that the probability of success is greater than 80%, which is indicated to be a safety factor of 1.2 the DEIS.
- LA2-11 HDD is not proposed for other crossings of waterbodies. Snohomish County strongly recommends that HDD crossings be developed for every waterbody that is designated as known and presumed habitat for Threatened and Endangered Species. Snohomish County will approve in-stream disturbance of ESA waters only when the applicant can demonstrate that all reasonable and feasible alternatives have been explored and when on-site mitigation is provided to off-set all potential environmental impacts. These standards have not been met in the DEIS document and supporting documents.
- LA2-12 4.3.2.3, Page 4-62, Pilchuck Creek: The proposal is to open cut the crossing. A part of the justification is that the wet open-cut method was used to install the existing pipelines. That argument is irrelevant and considers neither modern waterbody crossing techniques nor changes in environmental laws. Geologic considerations may be a paramount design constraint, but the construction design should include extensive efforts to render the impact as benign as possible when using all available and feasible construction techniques. Open trenching with the spoil placed within the stream bed on the downstream side of the trench is not adequate. The top of the pipe should be placed a minimum of 200 % of the calculated scour depth for the 100 year flood event. Backfilling the instream portion of the trench with the aid of bulldozers, trackhoes, and sidebooms has the potential to be disruptive beyond the construction easement. The proposed arguments to reject alternative crossing methods are weak, at best. Snohomish County believes that disruption would be minimized by using water bladders to isolate the crossing sections and to make the cuts in "dry" areas that are protected from flowing water.

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LA2-8 See the response to comment LA2-7.

LA2-9 Table 4.3.2-6 has been revised to include the waterbodies in the unincorporated portions of Snohomish County that are designated shorelines of the state or provided protection under provisions of the Endangered Species Act. Section 4.3.2.3 has been revised to note the county's objection to either open-cut or flume crossings of these waterbodies.

See also the response to comment LA2-11.

LA2-10 As discussed in section 4.3.2.3, the HDD method is a specialized crossing method that has the potential to avoid impacts on waterbodies but requires suitable geology, topography, and space (distance) to accommodate the bending radius of the pipe. Ideally, an HDD design will have nearly 100 percent probability of success; however, if a crossing location has unfavorable geology, topography, or both, the probability of success decreases or the HDD crossing method can become unfeasible. The probability of success for an HDD is the result of evaluation by the design and construction team based on the conditions encountered at the site. The crossing of the North Fork Stillaguamish River is estimated to have a 50 percent probability of success due to the topographic and geologic conditions at the crossing location. The exit point on the north side of the river is approximately 80 feet higher in elevation than the entrance on the south side of the river. The difference in elevation will result in the final approximately 475 feet of the HDD being unsupported by drilling fluids. Compounding the difficulties due to the elevation difference between the entrance and exit points, the upper 50 vertical feet of soil at the exit consist of sandy gravel with cobbles. These soils tend to be non-cohesive and, without support by drilling fluids, may collapse and cave into the HDD. The conditions at the crossing location of the North Fork Stillaguamish River are documented in the report titled *Capacity Replacement Project, HDD Geotechnical and Feasibility Assessment, Whatcom, Skagit, Snohomish, Pierce and Thurston Counties, Washington* (Golder, 2004a).⁶ The crossing has been designed to maximum the likelihood of success given the conditions at the crossing location.

Although the HDD of the North Fork Stillaguamish River has only a 50 percent chance of success, Northwest is willing to invest the resources to attempt the HDD. The wet open-cut alternative is proposed only if the HDD cannot be completed. The scour depth for the river is 7 to 9 feet in a 25-year flood event and 10 feet in a 100-year flood event. If Northwest must install the pipe using the wet open-cut method, Northwest would make every effort to get below the scour depth provided major boulders or rock formations do not

⁶ This report is too voluminous to include in this EIS. It is available for public inspection at the FERC's Public Reference Room in Washington, DC (call (202) 502-8317 for instructions) and at the WDOE's regional offices. If you reside in Whatcom, Skagit, Snohomish, or King Counties, you can access this document at the WDOE's Northwest Regional Office in Bellevue by calling the Public Disclosure Coordinator at (425) 649-7190 or (425) 649-7239. If you reside in Pierce, Thurston, Lewis, Cowlitz, or Clark Counties, you can access this document at the WDOE's Southwest Regional Office in Lacey by calling the Public Disclosure Coordinator at (360) 407-6365.

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LA2-10
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hinder excavation depth. If rock formations are found during excavation, the assumption would be made that scour would not continue beyond that depth. Northwest would also install concrete-coated pipe for protection against both buoyancy and exposure.

Section 4.3.2.3 contains a detailed discussion of the rationale for Northwest's selection of the crossing methods and elimination of alternative methods, and a description of the mitigation measures that would be implemented to minimize and compensate for construction-related impacts. Northwest's proposed mitigation measures are also described in Appendix S.

As noted in Appendix S, native woody species would be planted across the entire 75-foot-wide permanent easement and within 50 feet of the streambanks or channel migration zones at fish-bearing streams. Where the land use does not support a full 50 feet, or landowner approval is denied, Northwest would plant the available space. Species' placement would be correlated to moisture regime requirements based on three categories of wet, moist, or dry ground. Faster growing native trees may be placed closest to the bank top to provide the most rapid canopy recovery possible that can shade and overhang the stream. Plantings would conform to the FERC staff's Procedures, which advise that trees exceeding 15 feet tall grow no closer than 15 feet to the pipeline. By revegetating streambanks with riparian species, streambank stability would be enhanced over the long term and would provide for stream shading, sediment intercept, and input of detrital nutrients to the stream, all of which are key functions of riparian zones. The FERC staff's Procedures limit vegetation maintenance adjacent to waterbodies to allow development of a riparian vegetative strip. Fish-bearing streams would also be enhanced by placement of spawning-sized gravel and LWD, as well as replacement of existing culverts impacted by construction with properly sized culverts per WDFW guidelines.

Outside the 50-foot enhancement zone, restoration of the construction right-of-way to within 150 feet from the ordinary high water mark would be conducted consistent with restoration measures approved for Northwest's Machias Replacement and Everett Delta Projects. Specifically, temporary extra workspaces affecting woody species would be replanted with suitable native stock and the permanent right-of-way would be restored with the recommended native seed mixes.

LA2-11

As discussed in the response to comment LA2-10, the feasibility of an HDD is dependent on the geology and topography at the crossing location. Typically, an HDD is not feasible in areas of glacial till or outwash interspersed with boulders and cobbles, fractured bedrock, or non-cohesive coarse sands and gravels. These formations increase the likelihood that drilling would fail due to refusal of the drill bit; uncontrollable deflection of the drill bit by contact with random, inconsistent substrate (e.g., boulders); loss of drilling fluid through fractures or weak areas in the ground; or collapse of the drill hole in non-cohesive, unstable substrate. In addition to requiring suitable geologic conditions, the HDD method requires large temporary extra workspaces to prefabricate the pipeline string and to contain the drilling equipment, parking, and truck turn around area. The HDD method also has the disadvantage of

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- LA2-11 (cont'd) continuous activity for days or weeks. Moreover, the use of the HDD method to cross all waters of the state and all waters with listed species would greatly increase project costs. For these reasons, the FERC staff does not believe all waters of the state and all waters with listed species should be crossed using the HDD method.
- Section 4.3.2.3 has been revised to state that Northwest proposes to attempt an HDD crossing of the North Fork Stillaguamish River although the probability of success is 50 percent. Because of the high likelihood of failure of an HDD crossing at Pilchuck Creek (75 percent), Northwest does not propose to attempt one. Northwest proposes to cross the remaining waterbodies that are considered sensitive by Snohomish County using the flume method because the flume method is less destructive, construction occurs rapidly, the method is less risky, and the method is more economical. Some of these waterbodies were successfully crossed using the flume method during other recent Northwest projects.
- Section 4.3.2.3 contains a detailed discussion of the rationale for Northwest's selection of the crossing methods and elimination of alternative methods, and a description of the mitigation measures that would be implemented to minimize and compensate for construction-related impacts. Northwest's proposed mitigation measures are also described in Appendix S.
- See also the response to comment LA2-10 for additional description of Northwest's proposed mitigation measures.
- LA2-12 Section 4.3.2.3 has been revised to state that WDFW and tribal biologists familiar with construction techniques and expected flows in Pilchuck Creek believe a flume crossing may be feasible and recommend that Pilchuck Creek be crossed using the flume method. Northwest has stated that it would use the flume method if conditions are suitable at the time of construction. Pilchuck Creek was one of the waterbodies included in the evaluation of scour and erosion potential that was conducted in the spring of 2004 and documented in the report titled *Capacity Replacement Project, Stream Crossing Scour and Erosion Assessment, Whatcom, Skagit, Snohomish, Pierce, and Thurston Counties, Washington* (Golder, 2004c).⁷ Pilchuck Creek was evaluated as having a medium potential for scour. As discussed in section 4.3.2.4, Northwest would increase the depth of cover where necessary to accommodate the potential for long-term scour and profile changes. The depth of cover necessary to bury the pipeline below scour depth in Pilchuck Creek would be determined during detailed pipeline design using the information in the Golder scour and erosion assessment.
- Section 4.3.2.3 contains a detailed discussion of the rationale for Northwest's selection of the crossing method for Pilchuck Creek and elimination of

⁷ This report is too voluminous to include in this EIS. It is available for public inspection at the FERC's Public Reference Room in Washington, DC (call (202) 502-8317 for instructions) and at the WDOE's regional offices. If you reside in Whatcom, Skagit, Snohomish, or King Counties, you can access this document at the WDOE's Northwest Regional Office in Bellevue by calling the Public Disclosure Coordinator at (425) 649-7190 or (425) 649-7239. If you reside in Pierce, Thurston, Lewis, Cowlitz, or Clark Counties, you can access this document at the WDOE's Southwest Regional Office in Lacey by calling the Public Disclosure Coordinator at (360) 407-6365.

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alternative methods. Northwest states that the river is not wide enough to divert flow and the use of water bladders is precluded because of topography. Moreover, the use of bladders would require that the pipe be welded in the bottom of the creek, which is a safety issue. A detailed description of the mitigation measures that would be implemented to minimize and compensate for construction-related impacts is included in section 4.3.2.3 and Appendix S.

See also the response to comment LA2-10 for additional description of Northwest's proposed mitigation measures.

- LA2-13 Table 4.3.2-8, Page 4-64, Summary of Potential Crossing Methods for Pilchuck Creek: The mere fact that the workspace would be greater when using water bladders is not a compelling reason to use an open cut in flowing waters. It is the position of Snohomish County that impacts would be lessened in this waterbody, which is a shoreline of the state and habitat for Threatened and Endangered Species, by using water bladders as a containment method to divert water flows from the open excavation.
- LA2-14 4.3.2.3, Page 4-71, Mitigation Measures: The proposed mitigation measures are to restore the construction site. The DEIS fails to mention potential downstream impacts from the construction, including increased sediment loads and the potential for sediment to impair downstream gravel beds, spawning areas, feeding areas, and refugia. The potential impacts to the habitats are beyond the construction footprint, and these potential impacts are not addressed in the DEIS.
- LA2-15 4.3.2.7, Page 4-75, Surface Water Uses During Construction: The amount of water to be used for hydrostatic testing is given for the entire pipeline and for the Fort Lewis Loop, but not for the specific sections that are being tested within the pipeline. Discharge locations are provided. Statements are provided regarding measures to protect aquatic organisms and habitats, but no information is provided about the release rates, the release volumes, and the adequacy of the receiving drainage pathways to allow review and verification that there will be no impacts associated with the release of over 15 million gallons of water at point sources over a short timeframe. By using municipal water supplies for the testing, as indicated, chlorinated water would be discharged in several locations and chlorinated water may be harmful to aquatic organisms. Please provide an analysis of the potential biological and geological/surficial impacts associated with the release of water following hydrostatic testing.
- LA2-16 4.4.2, Page 4-84. FERC Staff's Wetland and Waterbody Construction and Mitigation Procedures: The bullets that identify potential impacts do not include potential damage to perched wetlands. Perched wetlands may be dewatered when the water-retaining layer is broken and water percolates into the underlying soils. A mechanism to re-seal the water retaining layer is required.
- LA2-17 4.4.2, Page 4-84. FERC Staff's Wetland and Waterbody Construction and Mitigation Procedures: The bullets that identify potential impacts do not include potential damage to lateral flow of groundwater. Trench plugs may decrease the potential for water movement along the pipeline pathway, but the trench may create a dam that decreases the lateral flow of groundwater across the pipeline path. The DEIS does not adequately address the potential for alteration of groundwater flow pathways.
- LA2-18 4.6.2.3, Page 4-122, General Impact and Mitigation; Inadvertent Release of Drilling Mud: The potential for bentonite to cause environmental damage in the case of a frac-out is given limited attention. The contention that only mussels and other macroinvertebrates will be the primary organisms to experience direct impacts is not compelling. The waterways are habitat for Threatened and Endangered species, and the settlement of drilling mud into spawning gravels and habitat are impacts that were not addressed in the DEIS.
- LA2-19 4.6.2.3, Page 4-123, General Impact and Mitigation; Sedimentation and Turbidity: The contention that the impact of increased turbidity would be limited to the period of in-stream work, and therefore temporal in nature, is inadequate. The section acknowledges that the highest levels of sedimentation and turbidity would be created by wet open-cut methods. The analysis of environmental impacts should be expanded to include potential impacts to downstream

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- LA2-13 See the response to comment LA2-12.
- LA2-14 Section 4.3.2.3 has been revised to include a site-specific discussion of the downstream effects of suspended sediments at all five of the proposed or alternative wet open-cut crossings for the project (i.e., North Fork Nooksack, North Fork Stillaguamish, South Fork Stillaguamish, and Nisqually Rivers and Pilchuck Creek). Section 4.6.2.3 has been revised to include additional information regarding impacts associated with sedimentation and turbidity.
- LA2-15 Sections 2.3.1, 4.3.1.4, and 4.3.2.7 have been revised to state that the dewatering structures would be sized to handle the required volume of water. The discharge rate would be controlled to prevent the water from flowing over the top of the dewatering structures and becoming a point source discharge. Northwest is required to use energy dissipation devices and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow. In addition, Northwest may not discharge at such a rate as to cause flow in a surface waterbody to increase more than 10 percent. The dewatering structures would be located in upland areas at a significant distance from wetlands and waterbodies to promote infiltration and prevent sedimentation of wetlands, waterbodies, or other sensitive areas. No test water would be discharged directly to waterbodies or wetlands.
- Sections 2.3.1, 4.3.1.4, and 4.3.2.7 have also been revised to clarify that all discharges would be conducted in accordance with the requirements for hydrostatic test water discharges included in Northwest's NPDES Individual Permit for Stormwater Discharges that would be issued by the WDOE. Northwest would test for chlorine before discharge if required by its NPDES permit and no chlorinated water would be released into surface waters or wetlands. These revised sections state that WDOE staff would conduct field reviews of Northwest's proposed hydrostatic test water discharge locations, as required, as part of the WDOE's NPDES permit review process. Based on this field review, modifications to the discharge locations would be made as necessary to ensure that the test water would infiltrate the ground before reaching sensitive areas.
- Section 2.5 has been revised to indicate that, in addition to Northwest's environmental inspection program, full-time third-party compliance monitors representing the FERC would be present on the construction spreads to monitor and document compliance with project mitigation measures and requirements. During construction, the third-party compliance monitors would conduct daily ongoing inspections of construction activities and mitigation measures, including the monitoring of hydrostatic test water discharge activities, to ensure that the dewatering structures are adequate to dissipate energy and filter the test water.
- LA2-16 The FERC staff's Procedures provides a mechanism to seal the trench to prevent the draining of perched wetlands. Section 4.4.2 has been revised to include this information. Native soil would be used as backfill material.
- LA2-17 Trench plugs consist of compacted or unexcavated spoil and are typically as permeable as the surrounding native soils and thus would not create a dam to restrict lateral flow of shallow groundwater across the pipeline path. The trench plugs would consist of native soil.

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LA2-18 As discussed in sections 4.3.2.3 and 4.6.2.3, the probability of an inadvertent release of drilling mud or fluid (also referred to as a frac-out) is greatest when the drill bit is working near the surface (i.e., near entry and exit points). Northwest has designed the proposed HDDs so that areas of greatest risk to a potential inadvertent release are in upland areas, away from the water's edge. The HDDs proposed as part of the Capacity Replacement Project are long, large diameter HDDs without a 100 percent certainty of success. A bentonite-based drilling mud is the only acceptable drilling fluid that can be used to maximize the probability of success of the HDDs. Given the length and configuration of the proposed HDDs, suitable substitutes for bentonite are not available. Northwest's HDD Plan (see Appendix I) describes how drilling operations would be conducted and monitored to minimize the potential for inadvertent drilling mud releases and also includes procedures for cleanup of drilling mud releases and for sealing the hole if a HDD cannot be completed.

In addition, section 4.6.2.3 has been revised to include additional information regarding the potential impacts of an inadvertent release of drilling mud on sensitive aquatic resources.

As discussed in sections 2.3.2 and 4.6.2.3, all impact evaluations and decisions associated with a frac-out would be made in consultation with the applicable agencies.

LA2-19 Sections 4.3.2.3 and 4.6.2.3 have been revised to include additional information on the downstream effects of sediment suspended during in-stream construction activities. A detailed description of the mitigation measures that would be implemented to minimize and compensate for construction-related impacts is included in section 4.3.2.3 and Appendix S.

See also the response to comment LA2-10 for additional description of Northwest's proposed mitigation measures.

LA2-19 spawning gravels, feeding areas, and refugia. The analysis should extend as far downstream (cont'd) as the plume of sediment is computed to exceed water quality standards.

LA2-20 4.6.2.3, Page 4-123, General Impact and Mitigation; Sedimentation and Turbidity: A part of the discussion includes placing the spoil fan (10) feet from the streambank (see Figs 2.3.2-1 and 2.3.2-2. However, the proposal includes crossing waterbodies where the excavated materials would be placed immediately downstream from the trench. This section needs to be expanded to include analysis of all sedimentation and turbidity impacts that occur from the construction, including upland, wetland, and waterbody crossings; including dewatering activities; including hydrostatic testing discharge locations; and including all access and staging areas.

LA2-21 4.8.3.1, Page 4-165, Existing Residences: The DEIS does not address impacts to existing septic systems. Any disruption to a septic system may preclude continued use of the residence until the system is repaired and the repairs have been approved by the Snohomish Health District. These impacts need to be addressed in the DEIS.

LA2-22 4.8.3.1, Page 4-165, Existing Residences: The DEIS does not address the mechanisms of maintaining access to residences and traffic flows during construction. There is a bulleted item that stipulates the maintenance of these traffic patterns, but no specifics are provided. The section needs to be expanded to include methods, including alternatives, that will be used to maintain access and traffic flows.

FERC STAFF'S UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN

LA2-23 Page E-2, II. Supervision and Inspection. A. Environmental Inspection. 1. Environmental Inspector. It appears that the Environmental Inspector is not expected to enforce local jurisdiction environmental compliance and permit conditions. Please modify the responsibilities to include enforcement of conditions and requirements that are imposed under permits from local jurisdictions.

Page E-2, II. Supervision and Inspection. B. Environmental Inspection Responsibilities. 7. Trench Dewatering. The NPDES permit for Snohomish County requires more than prevention of sediment transport into wetlands and waterbodies. Please modify this section to indicate that scour/erosion and sedimentation does not occur outside of the temporary construction easement for all upland, wetland, and waterbody areas, and to the buffers of the wetlands and waterbodies.

Page E-3, II. Supervision and Inspection. B. Environmental Inspection Responsibilities. 12. Erosion Control. Prevention of sediment flow into wetlands, waterbodies, sensitive areas, and onto roads is only a portion of the erosion control requirements. The plan must be sufficient to provide confidence that turbid water will not leave the construction site, which is the construction easement of the project. Please clarify the special circumstance that precludes this project from compliance with regulations that otherwise apply to every other project that proposes construction within unincorporated Snohomish County.

Page E-3, II. Supervision and Inspection. B. Environmental Inspection Responsibilities. 14. Erosion Control Repair. Temporary erosion control measures need to be repaired immediately upon identification. The proposal to make repairs within 24 hours is not adequate and may result in environmental damage that could be avoided with a more prompt response.

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LA2-20 Sections 4.3.2.3 and 4.6.2.3 have been revised to include additional information regarding impacts associated with sedimentation and turbidity. A detailed description of the mitigation measures that would be implemented to minimize and compensate for construction-related impacts is included in section 4.3.2.3 and Appendix S.

See also the response to comment LA2-10 for additional description of Northwest's proposed mitigation measures.

LA2-21 Northwest would identify all septic systems and other privately owned utilities within the proposed construction work area during discussions with individual landowners. These features would be located and flagged during surveying and staking activities to prevent accidental damage during construction. If privately owned utilities are damaged during excavation, they would be temporarily repaired the same day. Final repairs would be done before backfilling the trench. Northwest has indicated that it is in the process of negotiating construction stipulations with each affected landowner that legally bind both Northwest and the landowner to those stipulations. Unforeseen damages would be resolved pursuant to the mitigating circumstances. Before the end of construction, Northwest would contact the landowners to discuss the project and secure damage releases. In the event of undetectable damages, Northwest's easement agreement is binding upon Northwest to resolve demonstrated issues or problems.

LA2-22 As discussed in section 4.9.4, where project construction crosses roads necessary for access to private residences and no alternative entrance exists, Northwest would implement measures (e.g., plating over the open portion of the trench) to maintain passage for landowners and emergency vehicles. Northwest would also place and maintain traffic control measures during construction such as flag persons, warning signs, lights, and barriers to ensure safety and minimize traffic congestion.

LA2-23 The FERC staff's Plan was developed in collaboration with other federal and state agencies and the natural gas pipeline industry to minimize the potential environmental impacts of the construction of pipeline projects in general. Each time the Plan has been revised, the FERC staff has asked for public and agency input on potential modifications in the form of notices in the Federal Register and on the FERC Internet website. The January 17, 2003 version of the Plan, which Northwest would follow, incorporates comments received over a period of 12 months from the natural gas pipeline industry, the public, and other agencies. The intent of the FERC staff's Plan is to assist applicants by identifying baseline mitigation measures for minimizing the extent and duration of disturbances on soils associated with projects under the FERC's jurisdiction throughout the country. Because these are standard guidelines issued by the FERC, the Plan cannot be changed on a project-specific basis.

However, Northwest's project-specific ECR Plan (see Appendix G), which incorporates many of the mitigation measures outlined in the FERC staff's Plan and Procedures as well as agency-recommended revegetation and erosion control procedures, has been undergoing revision throughout the

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environmental review process for the project to address issues, concerns, and different guidelines identified by the various agencies. It is likely that additional revisions to the ECR Plan would be made before construction as additional issues or permit conditions are identified. In addition to the project-specific ECR Plan, various agencies (e.g., counties) may require Northwest to submit a Stormwater Pollution Prevention Plan that includes specific and/or more stringent requirements that Northwest must adhere to for the portion of the project under their jurisdiction. During the June 21, 2005 meeting between representatives of Snohomish County, Northwest, the FERC, the WDOE, and the WDFW, Northwest agreed to incorporate Snohomish County's specific requirements into a county-specific Stormwater Pollution Prevention Plan.

Additional acknowledgement that state and local guidelines may be more stringent than the measures included in the FERC staff's Plan and Procedures and/or proposed by Northwest, and that Northwest would be required to adhere to the most stringent of its permit conditions during construction and operation of the Capacity Replacement Project has been included in the EIS. In addition, section 2.5 has been revised to state that Northwest's training for construction personnel would include instruction on the guidelines and standards adopted by other federal, state, and local regulatory agencies, some of which may be more stringent than the FERC requirements. The revised section 2.5 also describes the third-party compliance monitoring program that would be implemented by the FERC during construction of the project. Under this program, full-time third-party compliance monitors would be present on the construction spreads to monitor and document compliance with project mitigation measures and requirements. These measures and requirements include those specified in federal, state, and local permits.

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Page E-5, III. Preconstruction Planning. G. Stormwater Pollution Prevention Plan (SWPPP). A SWPPP is required for Snohomish County grading permit review and for the Shoreline Permit. Snohomish County staff will review the document for compliance with Snohomish County codes. Compliance with the EPA's standards may be sufficient to comply with local requirements, but judgment cannot be made until the documents have been submitted for review and approval.

Page E-7, IV. Installation. F. Temporary Erosion Control. 1.c. Outfalls to Temporary Slope Breaks. It appears that permanent drainage improvements are being proposed outside of the construction right-of-way. Proposing to place energy dissipating devices at the end of slope breaks and located off of the construction rights-of-way would require permitting agencies to approve trespass and construction on properties to which Northwest Pipelines, Inc., does not have legal access. These intrusions must be relocated into the permanent easement and/or rights-of-way of Northwest Pipelines, Inc.

Page E-8, IV. Installation. F. Temporary Erosion Control. 2.b. Sediment Barriers. Requiring sediment barriers only on slopes greater than 5% and within 50 feet from a waterbody, wetland, or road crossing is inadequate to protect the buffers of the critical areas.

Page E-8, IV. Installation. F. Temporary Erosion Control. 2.c. Sediment Barriers. The inclusion of "as necessary" is an unacceptable qualifier. A sediment barrier should be required anywhere that the slope is continuous and over 5% all of the way to the margin of the waterbody, wetland, and road crossing. Inclusion of the phrase "as necessary" leaves the determination to the discretion of the Environmental Inspector, and it is the position of Snohomish County that such a device is necessary in every instance.

Page E-10 and E-11, V. Restoration. B. Permanent Erosion Control Devices. 2.d. Slope Breaks. It appears that permanent drainage improvements are being proposed outside of the construction right-of-way. Proposing to place slope break devices off of the construction rights-of-way would require permitting agencies to approve trespass and construction on properties to which Northwest Pipelines, Inc., does not have legal access. These intrusions must be relocated into the permanent easement and/or rights-of-way of Northwest Pipelines, Inc.

Page E-13, VII. Post-Construction Activities. A. Monitoring and Maintenance. 5. Routine Vegetation Maintenance. The methods of maintenance are not disclosed. Herbicides may not be used to control vegetation within 300 feet of ESA waters and within 100 feet of all other wetlands, streams, and waterbodies, as required under the Snohomish County Salmonid Habitat Management Plan Administrative Rule (adopted December 1, 1999) and SCC 30.62.310.

Appendix F. FERC STAFF'S WETLAND AND WATERBODY CONSTRUCTION AND MITIGATION PROCEDURES.

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Page F-2, IV. Preconstruction Planning. A. SWPPP. A SWPPP is required for Snohomish County grading permit review and for the Shoreline Permit. Snohomish County staff will review the document for compliance with Snohomish County codes. Compliance with the EPA's standards may be sufficient to comply with local requirements, but judgment cannot be made until the documents have been submitted for review and approval.

Page F-3, IV. Preconstruction Planning. A. SWPPP. 1.d. Equipment Parking. Parking and refueling within 100 feet of waterbodies and wetland boundaries is inadequate. The critical area

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The FERC staff's Procedures was developed in collaboration with other federal and state agencies and the natural gas pipeline industry to minimize the potential environmental impacts of the construction of pipeline projects in general. Each time the Procedures has been revised, the FERC staff has asked for public and agency input on potential modifications in the form of notices in the Federal Register and on the FERC Internet website. The January 17, 2003 version of the Procedures, which Northwest would follow, incorporates comments received over a period of 12 months from the natural gas pipeline industry, the public, and other agencies. The intent of the FERC staff's Procedures is to assist applicants by identifying baseline mitigation measures for minimizing the extent and duration of disturbances on wetlands and waterbodies associated with projects under the FERC's jurisdiction throughout the country. Because these are standard guidelines issued by the FERC, the Procedures cannot be changed on a project-specific basis.

However, Northwest's project-specific ECR Plan (see Appendix G), which incorporates many of the mitigation measures outlined in the FERC staff's Plan and Procedures as well as agency-recommended revegetation and erosion control procedures, has been undergoing revision throughout the environmental review process for the project to address issues, concerns, and different guidelines identified by the various agencies. It is likely that additional revisions to the ECR Plan would be made before construction as additional issues or permit conditions are identified. In addition to the project-specific ECR Plan, various agencies (e.g., counties) may require Northwest to submit a Stormwater Pollution Prevention Plan that includes specific and/or more stringent requirements that Northwest must adhere to for the portion of the project under their jurisdiction. During the June 21, 2005 meeting between representatives of Snohomish County, Northwest, the FERC, the WDOE, and the WDFW, Northwest agreed to incorporate Snohomish County's specific requirements into a county-specific Stormwater Pollution Prevention Plan.

Additional acknowledgement that state and local guidelines may be more stringent than the measures included in the FERC staff's Plan and Procedures and/or proposed by Northwest, and that Northwest would be required to adhere to the most stringent of its permit conditions during construction and operation of the Capacity Replacement Project has been included in the EIS. In addition, section 2.5 has been revised to state that Northwest's training for construction personnel would include instruction on the guidelines and standards adopted by other federal, state, and local regulatory agencies, some of which may be more stringent than the FERC requirements. The revised section 2.5 also describes the third-party compliance monitoring program that would be implemented by the FERC during construction of the project. Under this program, full-time third-party compliance monitors would be present on the construction spreads to monitor and document compliance with project mitigation measures and requirements. These measures and requirements include those specified in federal, state, and local permits.

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areas and buffers may extend 150 feet from the OHWM of streams and 100 feet from wetlands. Potential petroleum leakage from vehicles, equipment, and from fueling activities will result in impacts to these protected areas. Either the parking and refueling areas need to be moved farther from the margins of all sensitive areas or the parking and refueling areas need to be fully contained so that there is no potential for release of petroleum products into the critical areas and buffers.

Page F-3. IV. Preconstruction Planning. A. SWPPP. 1.e. Hazardous Materials. The section stipulates that storage of the listed hazardous materials will not be located within 100 feet of wetlands, waterbodies, or designated municipal watershed areas. This provision is inadequate. Critical area protections are discussed in the preceding item. The DEIS does not address domestic wells in the areas of concern and set-back requirements, and these water sources must be included in the analyses.

Page F-5. V. Waterbody Crossing. B. Installation. 4. Spoil Pile Placement and Control. a. Spoil Placement. Placement of spoil within 10 feet of the OHWM does not provide sufficient room for filtration of sediment from stormwater runoff should the perimeter BMP experience failure. No buffers for critical areas are less than 25 feet. Many of the waterbody crossings entail waters that are listed as habitat for ESA protected species. It is recommended that all spoils be relocated outside of the buffers to the waterbodies, which is 150 feet for ESA streams.

Page F-5. V. Waterbody Crossing. B. Installation. 4. Spoil Pile Placement and Control. b. Sediment Barriers. The requirement for the sediment barriers to prevent the flow of spoil or heavily silt-laden water into any waterbody is inadequate. Sediment and water that exceeds the allowed turbidity may not discharge into critical areas, or into buffers of the critical areas. The control should be expanded to include sufficient BMPs to prevent the discharge of water that exceeds the turbidity limits.

Page F-6. V. Waterbody Crossing. B. Installation. 6. Dry Ditch Crossing Methods. a. Using Dry Ditch Methods. The proposal to use dry ditch crossing methods for waterbodies up to 30 feet wetted width at the time of crossing is inadequate. The proposed pipeline will cross both Water of the State and streams with ESA listed species. Snohomish County strongly encourages boring beneath all Water of the State and all waterbodies with ESA listed species. In the event that a detailed evaluation concludes that boring is not a viable option for identified engineering and geologic reasons, then a detailed, site specific crossing mechanism should be proposed for each of the proposed crossing. The stream crossing plan should completely address all potential environmental impacts and include all available and reasonable practices to minimize the impacts from grading within the OHWM of the waterbody, including all downstream impacts from sedimentation. A site specific analysis of the potential impact of dewatering activities associated with the trenching activities is required. Downstream analysis of site specific sediment impacts is required.

Page F-6. V. Waterbody Crossing. B. Installation. 6. Dry Ditch Crossing Methods. b. Dam and Pump. All construction activities within the OHWM of the stream must be reviewed and approved. The statement that the dam-and-pump method may be used without prior approval should be removed from the section. A site specific analysis of the potential impact of dewatering activities associated with the trenching activities is required. Downstream analysis of site specific sediment impacts is required.

Page F-7. V. Waterbody Crossing. B. Installation. 6. Dry Ditch Crossing Methods. c. Flume Crossing. A site specific analysis of the potential impact of dewatering activities associated with

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(cont'd) | the trenching activities is required. Downstream analysis of site specific sediment impacts is required.

Page F-7. V. Waterbody Crossing. B. Installation. 6. Dry Ditch Crossing Methods. d. HDD Crossings. Snohomish County strongly encourages the use of HDD methods for all crossings of waters containing ESA listed species and for all Waters of the State. The HDD sites should be designed so that there is a minimum of 80% probability of success. A contingency plan with sufficient detail to allow review and approval of the alternative method should be included in the submission for permits so that there will be no delay in case a previously approved HDD crossing must switch to an alternative crossing method. These details and evaluations have not been provided as a part of the DEIS.

Page F-8. V. Waterbody Crossing. B. Installation. 7. Crossing Minor Waterbodies. The definition of a minor water body should be included with this section. It is not practical to comment on the adequacy of this section when the parameters being evaluated are not specified. Snohomish County does not consider any waterbody with fish to be a minor waterbody. No fish bearing waters should be proposed to be crossed by using open trench methods alone.

Page F-8. V. Waterbody Crossing. B. Installation. 8. Crossing Intermediate Waterbodies. The definition of an intermediate water body should be included with this section. It is not practical to comment on the adequacy of this section when the parameters being evaluated are not specified. No fish bearing waters should be proposed to be crossed by using open trench methods alone.

Page F-8, V. Waterbody Crossing. B. Installation. 9. Crossing Major Waterbodies. The section does not recognize local jurisdiction approval for major water bodies, and allows the Environmental Inspector to adjust erosion control BMPs without additional authorization. It is the position of Snohomish County that local permits are required for the grading activities, and that local approval is required for the construction activities. Modification to the approved plans may require approval of the permitting agency.

Page F-9, V. Waterbody Crossing. B. Installation. 10. Temporary Erosion and Sediment Control. a. sediment barriers. Removal of the sediment barriers during construction and replacing the barriers at the end of the construction day may defeat the purpose of the erosion control device. Erosion control requirements are performance criteria that must be met during all phases of construction. The requirement should be modified to indicate that the sediment barrier shall be replaced whenever discharge of sediment or turbid water is observed, including tracking by vehicles and machinery, and that additional sediment and erosion control BMPs will be employed until the discharged waters meet the threshold established by the underlying permits.

Page F-9, V. Waterbody Crossing. B. Installation. 10. Temporary Erosion and Sediment Control. b and c. Remove the phrase "as necessary". These BMPs should be required to be installed as a matter of practice.

Page F-9, V. Waterbody Crossing. B. Installation. 11. Trench Dewatering. Waters that are discharged from dewatering activities are required to meet the same standards as any other water that is flows off of the easement/right-of-way. Allowable turbidity levels are established in the Snohomish County NPDES permit, and water leaving the construction site cannot exceed these limits. Water quality standards may be found in WAC 1730201A and SCC 7.53.

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LA2-24 (cont'd) | Page F-10. V. Waterbody Crossing. C. Restoration 7. Restoration. Change the word "or" at the end of the second line to read ".... that are less than 50 feet from the waterbody, or and as needed to prevent ..."

Page F-10. V. Waterbody Crossing. D. Post Construction Maintenance. 2. Herbicides. This section is not consistent with the information provided on Page E-13, VII. Post-Construction Activities. PDS requests that herbicides not be used to control vegetation within 300 feet of ESA waters and within 100 feet of all other wetlands, streams, and waterbodies, as required under the Snohomish County Salmonid Habitat Management Plan Administrative Rule (adopted December 1, 1999) and SCC 30.62.310.

Page F-14. VI. Wetland Crossing. B. Installation, 3. Temporary Sediment Control. a, b, and c. Remove the term "as necessary." It is the position of Snohomish County that these BMPs are necessary for the stated situations.

Page F-14. VI. Wetland Crossing. B. Installation, 4. Trench Dewatering. Remove the word heavily and include turbidity standards. The section should read "... does not result in silt laden water and water exceeding the allowed turbidity levels flowing into any wetlands."

Page F-17. VII. Hydrostatic Testing. D. Discharge Location, Method, and Rate. 2. Discharge Locations. The proposal does not comply with this section. The discharge locations at 1429.x and 1428.x will flow into Pilchuck Creek. The discharge location 1425.3 will flow into Armstrong Creek. The discharges at 1424.x will flow into the North Fork of the Stillaguamish River. The discharge at 1422.x is near the location of the Arlington slope failure and a site that Northwest Pipelines repaired following the Nisqually Earthquake. The discharge at 1414.7 is into a tributary to Pilchuck Creek. All of these sites will impact either waterbodies that contain ESA listed species or are sites of known instability. The DEIS should address these potential impacts.

APPENDIX G. EROSION CONTROL AND REVEGETATION PLAN FOR THE CAPACITY REPLACEMENT PROJECT.

LA2-25 | Page G-8. 3. Best Management Practices. 3.1 Temporary Erosion Control Procedures. 3.1.1 Construction Ingress and Egress. Snohomish County questions the subjectivity that will be used in determining the need for construction entrances. Snohomish County strongly recommends that construction entrances be installed at all right-of-way access points that are not paved to such an extent that transport of sediment onto the paved r-o-w will not occur.

There does not appear to be a contingency plan to address any sediment that is transported onto the paved r-o-w and onto county roadways. At a minimum, a road sweeper should be available to clean the roadway of all transported sediment at the end of each workday. If sediment transport becomes a persistent or egregious problem, the wheel washing BMPs should be required.

LA2-26 | Page G-8. 3. Best Management Practices. 3.2. Sediment Barriers. It is the experience of Snohomish County that straw bale barriers provide marginal water quality treatment because the installation is more cosmetic than functional. Straw bale BMPs seldom achieve the intended results as runoff either goes through the joints between the bales or the stormwater runs around the barriers. In addition, contractors seldom have the mechanisms to remove the bales once they have become waterlogged and the binding fails.

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LA2-25 In a letter to Snohomish County dated June 20, 2005, Northwest committed to the following best management practice:

"No mud or dirt that has been tracked onto pavement during construction shall be left overnight. All tracked material shall be removed by broom, mechanical sweeper, or shovel and disposed of in a controlled sediment disposal area. Mud and dirt shall not be washed off of pavement into drainage conveyances. If it becomes necessary to wash mud/dirt off of pavement, the wastewater will be removed by vacuum truck and disposed of in an acceptable manner."

It is assumed this measure would be incorporated into the county-specific Stormwater Pollution Prevention Plan Northwest agreed to submit to Snohomish County during the June 21, 2005 meeting between representatives of Snohomish County, Northwest, the FERC, the WDOE, and the WDFW.

See also the responses to comments SA1-9, LA2-23, and LA2-24.

LA2-26 See the responses to comments LA2-23 and LA2-24.

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LA2-27 | Page G-14. 5. Hydrostatic Testing and Dewatering. 5.3 Water Discharge. Calculations are requested in order to adequately size the dewatering structures. As discussed previously, these devices typically are cosmetically applied and the discharge water merely overtops the structure with a resultant point discharge of large quantities of water.

Page G-14. 6. Non-Stormwater Discharges. There is a statement that the discharge structures will be appropriately sized for the discharge volume. This is a comfort statement with no documentation. Please provide the sizing calculations for review and approval.

APPENDIX I. HORIZONTAL DIRECTIONAL DRILL CONTINGENCY PLAN CAPACITY REPLACEMENT PROJECT

LA2-28 | HDD is proposed only for the crossings of the forks of the Stillaguamish River. HDD crossings should be used for all crossings of ESA waters and for all crossings of Waters of the State.

LA2-29 | Page I-4. 3.2 Site Specific Hydraulic Fracturing Potential Analysis. Stillaguamish River. The safety factor is presented as 1.2 for the North Fork of the Stillaguamish. The safety factor for the crossing of the South Fork of the Stillaguamish is listed as "approximately 1.1 to 1.15". These values do not provide confidence that there is sufficient engineering design to produce approvable results. The design should be re-engineered to yield a safety factor of 1.2 or greater, which is the safety factor reported for the HDD activity beneath the South Fork of the Stillaguamish River.

LA2-30 | Page I-7. 3.7.1 Aboveground (Upland) Release. 5) notification of release. By the nature of the proposed HDD locations, it is not acceptable for the DEIS to propose that a frac-out would not pose a threat to sensitive resources. Consequently, it is not acceptable to delay reporting to a failure until the standard weekly report. Snohomish County requests immediate notification of every frac-out event.

LA2-31 | Page I-9. 3.7.2 In-Stream Release. 1) Environmental Inspector Evaluation of the Problem. It is not sufficient for the Environmental Inspector to be the sole person to determine the extent of environmental damage that results from an in-stream frac-out.

Page I-9. 3.7.2 In-Stream Release. 6) Underwater released allowed to dissipate. This is not sufficient. An evaluation of impacts to downstream gravel beds and to potential habitats for ESA listed species should be the minimum analysis for potential impacts of an in-stream frac-out event.

Page I-9. 3.7.2 In-Stream Release. 7) Report. This section is inadequate. A report prepared by the Northwest Pipelines, Inc., which covers the incident, adverse impacts, and mitigation should not be considered a final action. Snohomish County request notification when the event occurs. The report, and all relevant field studies and documentation, will need to be submitted for review and approval by Snohomish County.

APPENDIX K. WATERBODIES CROSSED BY THE CAPACITY REPLACEMENT PROJECT.

LA2-32 | Page K-4 and K-5. The following waterbodies within Snohomish County are being crossed by the replacement project. These waterbodies are listed as waters containing ESA listed fish species, or as presumed habitat for the listed species:

LA2-27 | During the June 21, 2005 meeting between representatives of Snohomish County, Northwest, the FERC, the WDOE, and the WDFW, Northwest agreed to add appropriate notes and calculations to its construction plans.

See also the responses to comments LA2-2 and LA2-3.

LA2-28 | See the responses to comments LA2-10 and LA2-11.

LA2-29 | See the response to comment LA2-10.

LA2-30 | Snohomish County is included in the notification requirements outlined in section 3.9 of Appendix I that are cross-referenced in section 3.7.2.

LA2-31 | During the June 21, 2005 meeting between representatives of Snohomish County, Northwest, the FERC, the WDOE, and the WDFW, Northwest agreed to modify section 3.7.2 of Appendix I to clarify that the EI would make these determinations in consultation with the agencies and the third-party compliance monitors and the final report would be prepared in consultation with the agencies and the third-party compliance monitors and submitted to the agencies outlined in section 3.9 of Appendix I.

LA2-32 | See the responses to comments LA2-7, LA2-9, LA2-10, and LA2-11.

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LA2-32
(cont'd)

<u>Waterbody</u>	<u>Milepost</u>
Pilchuck Creek	1428.6
Armstrong Creek	1425.6
N. Fork Stillaguamish River	1424.3
Eagle Creek	1423.5
Tributary to S. Fork Stillaguamish River	1419.3
Star Creek	1415.3
Tributary to Little Pilchuck Creek	1412.1
Little Pilchuck Creek	1411.1
Little Pilchuck Creek	1410.5
Catherine Creek	1393.8
Tributary to Paradise Lake/Bear Creek	1393.3
Tributary to Paradise Lake/Bear Creek	1393.1

Each of these water is provided protection under ESA provisions. As stated previously, Snohomish County requests detailed analysis within the DEIS regarding the decisions to use any streambed disturbing crossing methods. Please clarify the special circumstance that precludes this project from compliance with regulations that otherwise apply to every other project that proposes water crossings impacting ESA waters within unincorporated Snohomish County.

Thank you for the opportunity to comment on the Draft EIS for the Capacity Replacement Project. Snohomish County looks forward to working with FERC and Northwest Pipelines Corporation to address all issues regarding the project within unincorporated Snohomish County.

Sincerely,

Susan Scanlan
PDS Supervisor

cc: Jason Cummings, Snohomish County Deputy Prosecuting Attorney
Tom Rowe, Snohomish County PDS, DRC Manager
Randolph R. Sleight, Snohomish County PDS, Chief Engineering Officer
Ed Caine, Snohomish County PDS, Project Manager
Candice Soine, Snohomish County DPW



City of Arlington Community Development

238 N. Olympic Avenue • Arlington, VA 98223

April 25, 2005

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

OFFICE OF THE
SECRETARY

2005 MAY -2 A 11:03

FEDERAL ENERGY
REGULATORY COMMISSION

Reference Docket Nos. CP05-32-000, -001

I would like to follow-up with several comments that I submitted during the Public Hearing on April 11, 2005 at the Hawthorne Inn.

- LA3-1 1. The City of Arlington through the assistance and support of the Stillaguamish Implementation Review Committee (SIRC) would like to assist FERC with identifying prioritized habitat projects to utilize the Large Woody Debris (LWD) that becomes available for stream and wetland restoration as a result of this project.
- LA3-2 2. I found bentonite is mentioned for sealing cracks in wetlands and also used during the Horizontal Directional Drill. I found a reference to the bentonite damaging the gills of juvenile salmonids, however I did not find any reference to the negative impact of the bentonite cementing or sealing up the interstitial spaces around spawning gravels. Being that sediments impacting spawning of Stillaguamish Chinook have been identified as a limiting factor to spawning success the applicant should provide another alternative to bentonite (SIRC 2000).
- LA3-3 3. Does the depth of the proposed pipe from section M.P. 1422.6 through 1424.4 provide enough clearance to protect the pipe from the Channel Migration Zone activity as referenced to protect the Watershed Functions as required to support sustainable populations of Stillaguamish Chinook? This reach is also within a portion of Arlington's Urban Growth Boundary. The City encourages FERC to work with the landowner Hank Graafstra and other landowners located in the reach to restore the stream and wetlands during the time of construction to reduce future re-disturbance of those areas. The City also looks forward to working with the Northwest Pipeline Corporation in establishing future uses on those lands within our UGA that are compatible with mutual goals.
- LA3-4 4. The City of Arlington Water Department recognizes the project poses a risk of contaminating two active wells and one reserve well within its Haller Park Well Field, particularly related to horizontal directional drilling under the North and South Forks of the Stillaguamish. This activity is less than one mile upstream of our well field, which supplies approximately 70% of Arlington's water. While we are not claiming a sole source aquifer designation, the boreholes must penetrate the alluvial and recessional outwash aquifers that are within the one-year time-of-travel zone in our wellhead protection plan. Risks to our water supply include the

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LA3-1 Section 4.3.2.3 has been revised to indicate the City of Arlington's interest in assisting with the identification of prioritized habitat projects to utilize the LWD that becomes available as a result of the Capacity Replacement Project.

LA3-2 As discussed in sections 4.3.2.3 and 4.6.2.3, the probability of an inadvertent release of drilling mud or fluid (also referred to as a frac-out) is greatest when the drill bit is working near the surface (i.e., near entry and exit points). Northwest has designed the proposed HDDs so that areas of greatest risk to a potential inadvertent release are in upland areas, away from the water's edge. The HDDs proposed as part of the Capacity Replacement Project are long, large diameter HDDs without a 100 percent certainty of success. A bentonite-based drilling mud is the only acceptable drilling fluid that can be used to maximize the probability of success of the HDDs. Given the length and configuration of the proposed HDDs, suitable substitutes for bentonite are not available. Northwest's HDD Plan (see Appendix I) describes how drilling operations would be conducted and monitored to minimize the potential for inadvertent drilling mud releases and also includes procedures for cleanup of drilling mud releases and for sealing the hole if a HDD cannot be completed.

In addition, section 4.6.2.3 has been revised to include additional information regarding the potential impacts of an inadvertent release of drilling mud on sensitive aquatic resources.

As discussed in sections 2.3.2 and 4.6.2.3, all impact evaluations and decisions associated with a frac-out would be made in consultation with the applicable agencies.

LA3-3 As discussed in sections 4.3.2.2 and 4.4.2, Northwest would restore all waterbodies and wetlands in compliance with the FERC staff's Plan and Procedures and any additional specific protective and restoration measures required by site-specific conditions or permitting agencies. The land retained by Northwest for its permanent right-of-way would be allowed to revert to former use; however, certain activities such as the construction of aboveground structures, including houses, house additions, garages, patios, pools, or other objects not easily removable, or the planting and cultivating of trees or orchards, would be prohibited within the permanent right-of-way.

Section 4.3.2.4 has been revised to address channel migration issues. The revised section 4.3.2.4 states that Northwest is working with the WDFW to identify areas where repairs are necessary and, where feasible, would attempt to complete the repairs concurrently with the work associated with the Capacity Replacement Project.

LA3-4 An HDD crossing of the North and South Fork Stillaguamish Rivers would avoid disturbing the waterbodies and any associated contaminants at the crossing locations. It is highly unlikely that significant amounts of arsenic or other contaminants would be mobilized by the HDD process and travel through the aquifer to the wells. As a result, construction activities at the crossing locations are not expected to pose a threat to the City of Arlington well field. Nevertheless, as requested by the City of Arlington, Northwest would notify the city before construction, monitor the municipal wells, and provide the city with results obtained from any private well testing within the Stillaguamish Basin if permission is granted by the landowner. Section 4.3.1.3 has been revised to include this information. Northwest's adherence to its SPCC Plan would also minimize the potential for contaminant releases due to spills.

LA3-4
(cont'd)

release or re-suspension of arsenic or other contaminants held within the surficial geology, and the accidental release of petroleum hydrocarbons, bentonite, and other construction materials. If groundwater flows move those project-related contaminants to our well field, the City feels that the applicant would be responsible for replacing the necessary water supply and infrastructure in perpetuity to provide 100 percent of the potential water supply present prior to this project, including 100 percent of our current instantaneous and annual water rights.

LA3-5

5. I didn't see that under wildlife present in Olson Lake at M.P.1419.5 that you listed turtles. I have never identified the species of turtle in that lake, but have been notified of turtle presence several times.

Thank you for the opportunity to Comment

Bill Blake
City of Arlington
Interim Community Development Director
360-403-3440

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LA3-5

Section 4.4.3 has been updated to recognize that turtles have been reported and could be present in Olson Lake.